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AUTHOR Smith, Kenneth E.; Croom, Laura
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ABSTRACT

This study explored relationships between children's multidimensional self-concepts and teachers' beliefs about developmentally appropriate practices (DAP). Twenty-three boys and 28 girls were given the Self Description Questionnaire-I (SDQ-I) twice to measure multidimensional self-concept; their teachers were given the Primary Teacher Questionnaire to measure beliefs about traditional versus developmentally appropriate practices. Multiple regression analyses to predict the children's later self-concept score from the earlier SDQ-I scores and teacher beliefs showed that traditional practices predicted general school self-concept for boys, but that DAP was not a predictor of any dimension of self-concept. Correlational analyses showed that for boys, DAP and traditional practices both were positively related to several of the academic self-concept scales of the SDQ-I, but for girls DAP was inversely related to physical ability self-concept. Findings pose contradictions to the literature on DAP and child outcomes. (Contains 67 references.) (Author/EV)

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Running Head: CHILD SELF-CONCEPT AND TEACHER BELIEFS

Children's Multidimensional Self-Concepts and Teacher Beliefs about Developmentally Appropriate Practices

by

Kenneth E. Smith
University of Nebraska at Omaha
Omaha, Nebraska

Laura Croom
Westside Community Schools
Omaha, Nebraska

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Abstract

Relationships between children's multidimensional self-concepts (SC) and teachers' beliefs were explored. Twenty-three boys and 28 girls were given the Self Description Questionnaire-I (SDQ-I) in November and April to measure multidimensional SC, and their teachers were given the Primary Teacher Questionnaire to measure beliefs about traditional (TRAD) vs. developmentally appropriate practices (DAP). Multiple regression analyses to predict the April SC from the November SDQ scores and teacher beliefs showed that TRAD predicted general school SC for boys, but that DAP was not a predictor of any dimension of SC. Correlational analyses showed that for boys DAP and TRAD both were positively related to several of the academic SC scales of the SDQ, but for girls DAP was inversely related to physical ability SC. Findings are discussed as contradictions to the literature on DAP and child outcomes.

An idea fundamental to the research on children's self-concepts is that self-perceptions develop as a result of the child's interaction with the environment (Beane, 1991; Rosenholtz, 1981; Shavelson, et al., 1976; Stipek & Daniels, 1988; Stipek & MacIver, 1989). An equally important notion is that self-concept is not a unitary, global construct but a multidimensional one (Byrne, 1984; Byrne, Gavin, & Worth, 1996; Delugach, et al., 1992; Marsh & Gouvernet, 1989; Marsh, et al., 1991; Shavelson, Hubner, & Stanton, 1976). The sum of this body of research is that children construct complex perceptions of themselves through their experiences with their world and their interpretations of their own place within it. Young children spend a great deal of time in classrooms and so it is reasonable to ask what the effects of such a salient environment might be on children's self-concepts. In particular, the present study examined the relationship between one aspect of the classroom environment, teachers' beliefs about developmentally appropriate practice, and second grade children's multidimensional self-concepts.

The publication in 1987 by the National Association for the Education of Young Children (NAEYC) of its influential guidelines for developmentally appropriate practice (DAP) (Bredekamp, 1987) stimulated a flurry of research on the attitudes and beliefs of classroom teachers concerning DAP, as well as research on the effects on children of developmentally appropriate vs. inappropriate environments (Dunn & Kontos, 1997). In the present

study, teacher classroom practices were not directly assessed but were inferred from teacher beliefs. But, based on social cognitive attribution theory, it is reasonable to expect teachers' actual classroom behavior toward children to manifest the beliefs systems and expectations they hold (Eiser, 1983; Harvey & Weary, 1985; Olson, Roese, & Zanna, 1996; Rogers, 1982). Thus, we can infer that teacher practice is at least partially reflected in such teacher beliefs (Dunn & Kontos, 1997; Pajares, 1992). The relationship between teacher practice and teacher beliefs has been extensively examined in early childhood education settings. Spodek (1988a; 1988b) explored the implicit theories that teachers use to make classroom decisions and argued that as teachers construct their own understanding of development, curriculum, and method, they interpret practical and theoretical knowledge to integrate such constructions into classroom practice. While some researchers have found discrepancies between teacher beliefs and practices in settings with young children (Hatch & Freeman, 1988; Verma & Peters, 1975), generally the attitudes and values held by teachers appear to be related to effective practice in early childhood classrooms (Feeny & Chun, 1985). In particular, early childhood teachers' beliefs have been associated with the provision of early literacy experiences for children (Wing, 1989), kindergarten retention practices (Smith & Shepard, 1988), teacher verbal interaction patterns with children (Kagan & Smith, 1988), and shared decision-making in classrooms (Oakes & Caruso, 1990). Although more research on the relationship between teacher beliefs and classroom practices is needed in general (Pajares, 1992) and in early childhood settings in particular (Dunn & Kontos, 1997),

several studies support the presumption of a relationship between belief and practice (Charlesworth et al., 1993; Hyson, Hirsh-Pasek, & Rescorla, 1990; Kagan & Smith, 1988; Oakes & Caruso, 1990; Smith & Shepard, 1988; Spidell, 1988).

How, then, do appropriate environments affect children's development and learning and what is the impact of school environments on self-concept? The level of developmental appropriateness in classroom environments, as reflected in teacher beliefs and practices, appears to affect young children's cognitive development, achievement, and socio-emotional development. Positive cognitive and achievement effects of developmentally appropriate settings have been documented. Appropriate environments enhance verbal skills and overall language development (Dunn, Beach, & Kontos, 1994; Marcon, 1992; Marcon, 1993). Moreover, in classrooms where child-initiated activity was valued children's creative and divergent thinking were facilitated (Hirsh-Pasek, Hyson, & Rescorla, 1990; Hyson, Hirsh-Pasek, & Rescorla, 1990). Developmentally appropriate classrooms also appear to have both immediate (Marcon, 1992; Stipek, Feiler, Daniels, & Milburn, 1995) and long-term positive effects on achievement (Burts, Hart, Charlesworth, DeWolf, Ray, Manuel, & Fleege, 1993; Frede & Barnett, 1992; Marcon, 1994).

Social and emotional effects have also been shown. Children in inappropriate programs exhibited higher levels of stress throughout the classroom day than did children in appropriate programs, with low socio-economic-status children showing more stress than higher SES children, and boys showing more than girls (Burts, Hart, Charlesworth, & Kirk, 1990; Burts, Hart,

Charlesworth, Fleege, Mosely, & Thomasson, 1992; Hyson, Hirsh-Pasek, & Rescorla, 1990; Love, Ryer, & Faddis, 1992). Marcon (1992; 1993; 1994) also found positive effects on children's social skills and work habits, as well as self perceptions.

In general, developmental theory has long emphasized that young children's sense of identity comes from the interaction between their developing abilities and the physical and interpersonal environments (see, e.g., Erikson, 1963; Harter, 1983; Piaget & Inhelder, 1969; Vygotsky, 1962). Katz (1989) points out that young children are not only limited to the conditions adults provide for them but have few resources for avoiding circumstances or altering settings that might threaten their developing sense of self. Thus, one would expect that the level of developmental appropriateness of the classroom environment may impact a young child's developing self-concept. However, despite extensive work on the self-concepts of older children, relatively little has been done with young children. Yet, there is increasing evidence that children even as young as 5 years of age can differentiate between various aspects of self-concept (Harter, 1983; Harter & Pike, 1984; Stipek & MacIver, 1989). The present study is an attempt to extend the research on teacher beliefs about developmentally appropriate practice by connecting it to this growing body of research on children's self-concepts.

Research Questions

Specifically, the present study was designed to explore the relationship between teachers' beliefs about developmentally appropriate practices and the multidimensional self-concepts of

the children in their classrooms. In particular, since prior research has demonstrated an impact of developmentally appropriate practices both on children's achievement and on their socio-emotional development, would various dimensions of children's academic and nonacademic self-concepts be positively associated with teacher endorsement of developmentally appropriate practices?

Method

Participants

Children. Participants were selected from 14 second-grade classrooms in a small, independent urban school district in Nebraska with approximately 5200 students, predominantly middle-class. Two female and two male students were randomly selected from each classroom. For each of the settings used there was only one teacher with principal responsibility for the learning environment, classrooms that were team taught having been eliminated from the study. Since a child's participation in the study depended on both parental approval and the cooperation of the classroom teacher involved, the combination of these factors resulted in a final group of 51 children (28 females and 23 males) from 14 classrooms being included in the study.

Teachers. Sixteen of 17 second-grade teachers in the district responded positively to an invitation to participate in the study. Two teachers were dropped from the sample when timely access to children in their classrooms proved to be problematic. The 14 second-grade teachers participating in the study were a fairly experienced group. Eight of the 14 had more than 10 years of overall teaching experience and 7 had been teaching at the

second-grade level for at least 4 years, with 3 for more than 10 years. In addition, half the group already held masters degrees. While all held elementary-level certification, only one of the 14 held an early childhood endorsement, which in Nebraska is a further licensure that may be added onto the standard elementary certificate.

Instruments

Two paper-and-pencil instruments were used in this study. One, the SDQ-I, assessed children's multidimensional self-concepts, while the other, the PTQ, assessed teachers' endorsement of developmentally appropriate practices.

The Self Description Questionnaire (SDQ-I). The SDQ-I (Marsh, 1988) was used to assess the children's self-concepts. The SDQ is based on the Shavelson et al. (1976) model of self-concept, which views the construct as multifaceted. The eight subscales of the SDQ can be treated separately or combined to yield summary measures of academic self-concept (the average of scores on the Reading, Mathematics, and General School self-concept scales), and non-academic self-concept (the average of the scores on the Physical Ability, Physical Appearance, Peer Relationships, and Parent Relationships self-concept scales). A summary measure of total self-concept also is available by averaging the academic and non-academic scores. The SDQ-I is a 76-item interview. Children are asked to reply to simple statements (e.g., "I'm good at reading."; "I make friends easily.") with one of five responses: "yes, always", "yes, sometimes", "sometimes yes, sometimes no", "no, sometimes", and "no, always", scored as 5 through 1, respectively. Each of the

subscales on the SDQ-I consists of eight positively worded statements, for a total of 64 items. An additional 12 negatively worded items are included to disrupt positive response set bias, that is, the tendency of the child to use the positive end of the scale independently of the item content. However, because Marsh's research (1986) has indicated that children do not provide consistent responses to negatively worded items, these are not included in the scoring for self-concept components. In a study of self-concepts of young children between 5 and 8 years of age, Marsh, Craven, & Debus (1991) reported SDQ-I coefficient alpha reliability estimates of .879 for the nonacademic score, .902 for the academic score, and from .730 to .861 for the individual subscales, for a sample of 169 second-grade children.

Moreover, in the same study Marsh and his colleagues performed a confirmatory factor analysis to compare the fit of two models to their SDQ-I data. One model posited a two-factor structure, one factor defined by scores from the three academic scales, the other by scores from the four nonacademic scales, in essence, the summary academic and nonacademic scores that are calculated from the subscales. The other model posited an eight-factor structure where each factor corresponded to one of the SDQ subscales. They found that the eight-factor model was substantially better at accounting for their kindergarten through grade-two SDQ data than was the two-factor model, with the advantage greater for the older than for the younger children. In the present study described below, therefore, while analyses on both the two summary self-concept scores (academic and nonacademic) and the individual subscales are reported, greater

emphasis is placed on results involving the subscales.

The Primary Teacher Questionnaire (PTQ). The Primary Teacher Questionnaire (Smith, 1993) is a 42-item teacher belief scale based on the 1987 guidelines on developmentally appropriate practice in the primary grades published by the National Association for the Education of Young Children (NAEYC) (Bredekamp, 1987). While the full guidelines address practice with children from birth through age eight, the PTQ reflects only the portion of the guidelines relevant to school-age children. The PTQ has been shown to discriminate well among individuals on the basis of beliefs about developmentally appropriate practice (Ketner, Smith, & Parnell, 1996; Smith, 1993; 1997).

The PTQ consists of 2 subscales, one of 18 items assessing endorsement of developmentally appropriate practice (DAP Scale) and the other of 24 items assessing endorsement of more traditional practice (TRAD Scale). Respondents indicate their level of endorsement of each of the 42 items using a 4-point Likert-type scale comprising the categories "strongly disagree", "somewhat disagree", "somewhat agree", and "strongly agree", scored as 1 through 4, respectively. The score reported for each scale is the sum of responses to the items for that scale. For the DAP Scale scores can range between 18 and 72, and for the TRAD Scale between 24 and 96. An overall, or total PTQ scale score, (range = 42 to 168) also can be reported by reversing the scoring to the TRAD Scale items, summing these, and adding that total to the DAP score, thus yielding an overall measure of endorsement of appropriate practices and rejection of inappropriate practices. In a study reporting the development of the PTQ (Smith, 1993),

the coefficient alpha reliability of the DAP and TRAD scales was .802 and .867, respectively.

Procedure

Data gathering. The Primary Teacher Questionnaire was sent to all district second-grade teachers in early November of the school year. Since teacher beliefs were being viewed as a major source of influence on the nature of children's experiences in the classroom, settings involving a team teaching arrangement were eliminated on the assumption that any possible effects of beliefs might be confounded by multiple sets of beliefs operating in the same classroom.

Teachers were sent a packet containing instructions, the PTQ, and a computer-scored response sheet, and were asked to return the completed scale if they wished to participate in the study. Sixteen teachers did so. Problems of access to classrooms for later interviews with the children resulted in two teachers being dropped from the study, so the final group represented 14 different second grade classrooms.

The Self Description Questionnaire-I (SDQ-I) was administered to the children at two points during the school year, in early November and again in late-April. The initial time was chosen because it was thought that accurate assessment of young children's self-concept in a particular setting could be affected both by a lack of familiarity with the setting and its workings and by their comfort level with the adult in charge of that setting (Marsh, Craven, & Debus, 1991). Therefore, early November was chosen as a time by which both familiarity and comfort should have been established, while the overall impact of the setting

would still be relatively novel. Both the initial and follow-up administration of the SDQ-I were individually given to the children by building personnel familiar to them. The interviewer read each statement from the SDQ and asked the child to verbally respond with one of the five responses. Following Marsh's recommendations for administration of the SDQ-I, interviewers were instructed to paraphrase whenever necessary or appropriate and children were encouraged to voice any confusion or uncertainty concerning the statements read to them. For most children each interview took approximately 15 minutes to complete.

Design and data analysis. The present descriptive study was conducted as correlational research, assessing relationships between the teachers' PTQ scores (DAP and TRAD subscale scores) and the children's self-concepts scores from the SDQ-I, both the summary scores (academic, and nonacademic self-concept scores) and the individual subscale scores. Multiple regression analyses were used to assess the contribution of teacher beliefs to the multidimensional self-concepts of the children, and a series of *t*-tests was performed to assess SDQ-I sex differences.

Initially, the sample was split by sex (23 boys and 28 girls). Two series of *t*-tests were performed on both the early and later SDQ-I data to assess sex-differences on the SDQ subscales. Next, multiple-regression analyses were conducted separately for boys and for girls, predicting the April academic, nonacademic, and SDQ subscale self-concept scores. Predictor variables in each equation were the comparable November self-concept scores and the teacher DAP and TRAD Scale scores from the PTQ. Variables were entered into an equation in a stepwise

fashion and only those variables that contributed a significant ($p < .05$) additional proportion of variance were retained in the equation. Finally, bivariate relationships among teacher and child variables were evaluated with Pearson correlations (1-tailed).

Results

Initially, the belief scores for the teachers and the self-concept scores for the children in this study were examined. For the teachers the mean for the DAP Scale was 58.94 ($SD = 6.98$) while the mean for the TRAD Scale was 73.24 ($SD = 9.09$). For the children in the study the mean for the nonacademic self-concept scores was 35.06 ($SD = 3.52$) and the mean for the academic self-concept scores was 35.06 ($SD = 4.86$). Separate means by sex for the self-concept scores are reported in Table 1.

Comparison of Self-Concept, by Sex

T-tests, with sex as the grouping variable, were performed on both the initial and the subsequent child self-concept data from the SDQ-I. For the November SDQ data, results indicated no difference between girls and boys in academic self-concept, $t(49) = .81$, n.s., but a significant difference in nonacademic self-concept, $t(49) = 2.78$, $p=.008$,(M[boys] = 36.43, $SD = 3.01$; M[girls] = 34.11, $SD = 2.94$). Examination of the separate subscales that contribute to the nonacademic self-concept score indicated no initial sex differences on the Peer Relationships or Parent Relationships scales, but significant differences on the Physical Ability scale ($t(49) = 3.81$, $p < .001$), with boys higher than girls (M[boys] = 37.96, $SD = 2.74$; M[girls] = 32.79, $SD = 6.02$) and on the Physical Appearance scale ($t(49) = 2.11$, $p =$

.04), with boys higher than girls (M[boys] = 35.17, SD = 3.20; M[girls] = 33.14, SD = 3.58). T-tests for the later SDQ child self-concept data indicated no significant sex differences in either academic self-concept (t(49) = 1.20, n.s.) or nonacademic self-concept (t(49) = 1.34, n.s.). However, the sex difference on the Physical Ability scale remained stable (t(49) = 3.50, p=.001), with boys once again showing a higher self-concept in this area (M[boys] = 38.57, SD = 1.67; M[girls] = 33.61, SD = 6.61).

Multiple Regression Analyses

Multiple regression analyses were performed separately for boys and for girls. For each of the SDQ subscales, regressions were conducted that predicted the April scores, with the November scores and teacher DAP and TRAD scores as predictor variables. The results of the regression analyses predicting boys' self-concept scores from teacher belief scores are shown in Table 2 while results predicting girls' self-concept scores are shown in Table 3. In most of the analyses the November self-concept scores were the strongest predictors of the April scores. This was as expected, the earlier scores having been used in the analyses to adjust for initial self-concept levels. For boys, the November scores were the strongest predictor of the April scores for each of the SDQ subscales except the Peer Self-Concept scale, while for girls they were the strongest predictor for each subscale except the Reading Self-concept and General School Self-Concept scales.

Regressions on the boys' SDQ subscale scores indicated that the teacher TRAD scores were a significant predictor of the General School Self-Concept scale scores, but not of any other dimension of self-concept. Approximately 62.5% of the overall

variance in the April General School Self-Concept scale scores was accounted for by the comparable November scores, and, when teacher belief scores were entered into the equation, the TRAD scores explained an additional 11.3% of the variance, while the DAP scores explained no significant additional proportion of the variance.

Separate regressions on the girls' SDQ subscale scores indicated that neither the DAP nor TRAD teacher belief scores explained any significant proportion of the variance in the April self-concept scores for any of the subscales.

Correlations Between Self-Concept and Teacher Beliefs

Separate correlation matrices for boys and for girls were produced and the correlations between the component subscales of the PTQ (DAP and TRAD) and the summary self-concept measures of the SDQ (academic and nonacademic self-concept) were examined. For boys higher TRAD Scale scores were associated with higher academic self-concept (r=.50, p< .01) scores, but not with the nonacademic self-concept scores (r=.27, n.s.). The DAP Scale scores for boys also were related to academic self-concept (r=.39, p<.05) but not to nonacademic self-concept. For girls, the TRAD Scale scores were related to neither of the summary self-concept measures, but the DAP Scale scores were negatively associated with the nonacademic self-concept (r= -.37, p< .05).

Associations between teacher DAP and TRAD scale scores and child scores on the SDQ subscales were also examined. For boys (see Table 4), the teacher TRAD score was related to scores on all the scales that make up the academic self-concept score, that is the Reading Self-Concept scale (r = .35, p < .05), the Math Self-

Concept scale (r = .46, p < .05), and the General School Self-Concept scale (r = .58, p < .01), while teacher DAP scores were also related to the Math Self-Concept (r = .37, p < .05), and the General School Self-Concept scales (r = .45, p < .05). For girls (see Table 4), teacher DAP scores were negatively associated with scores on the Physical Ability Self-Concept scale (r = -.34, p < .05).

Discussion

The following discussion focuses first on patterns of sex differences in self-concept and then turns to the relationship between teacher beliefs and child self-concept.

Sex Differences in Self-Concept

The results of the present study showed a pattern of sex differences in self-concept scores that in some respects was, and in other respects was not, stable over the six months of the investigation. Initially, the t-tests indicated that in early November boys had significantly higher nonacademic self-concepts than did girls. However, this pattern was not maintained in the April scores. But, when boys' and girls' scores on the SDQ subscales were examined separately, differences in two component areas of the nonacademic score stood out, physical abilities and physical appearance. Analysis of the November scores in these two areas showed boys scoring significantly higher than girls in both, while the t-tests on the April scores indicated that whereas the physical appearance difference was no longer significant, boys still scored significantly higher on the Physical Ability subscale

of the SDQ.

This pattern of sex differences in self-concept supports findings reported by Marsh, Craven & Debus (1991). In a study of kindergarten through second-grade children who were administered the SDQ, they found significant sex differences on both the Physical Ability and Physical Appearance scales, with boys higher in physical ability self-concept and girls higher in physical appearance self-concept, as well as a difference in favor of girls in reading self-concept. However, sex did not account for any more than a trivial amount of the variability on any of the SDQ subscales except for the Physical Ability scale (Marsh, Caraven, & Debus, 1991). In essence, the findings from the present study match very closely those from this previous study by Marsh and his colleagues.

Teacher Beliefs and Child Multi-Dimensional Self-Concept

The relationship between teacher beliefs and child self-concept was assessed in several ways. First several multiple regression analyses were run, with the first set being to predict the April SDQ summary self-concept scores from the PTQ component scores, followed by a second set to predict the April SDQ subscale scores from the PTQ component scores. As mentioned previously, in all the regression analyses the relevant November SDQ scores were entered into the equations to adjust for initial self-concept levels. Next, the correlations between the PTQ component scores (DAP and TRAD) with the SDQ summary scores were examined, followed by looking at correlations of the DAP and TRAD scores with the subscales of the SDQ.

The central finding of the multiple regression analyses was

fairly straightforward: teacher beliefs did not predict any aspect of self-concept for girls, while, for boys teacher endorsement of traditional classroom practices significantly predicted one component of academic self-concept,i.e., general school self-concept. The items on this particular SDQ subscale ask the child to describe him- or herself in relation to school in general, rather than to any particular school subject. Thus, it can be viewed as a broad indicator of a child's perception of self-as-student. On the other hand, teacher belief in developmentally appropriate practices was not a significant predictor of any dimension of self-concept for either boys or girls. Thus, the most substantive finding of this study, that teacher endorsement of traditional classroom practices accounted for a significant proportion of boys' general school self-concept, is contrary to our expectations on child outcomes based on the literature on teacher beliefs about developmentally apropriate practices.

Moreover, the patterns of correlations between teacher belief scores and dimensions of child self-concept, while less conclusive than the regression analyses, also were interesting. For girls an inverse relationship was found between teacher endorsement of appropriate practice and nonacademic self-concept. The higher the teacher's endorsement of developmentally appropriate practice, the lower was girls' nonacademic self-concept. But, since reporting of results based on the individual SDQ subscales is recommended over use of the summary scores, the subscales also were examined in relation to teacher beliefs. Here it was clear that a negative association between teacher DAP scores and girls'

Physical Ability scale scores accounted for the pattern in nonacademic self-concept. As previously noted, in this study girls showed a lower physical ability self-concept than did boys. Such a pattern was consistent with sex effects found in previous SDQ research (Marsh, 1989; Marsh, Caraven, & Debus, 1991) as well as with the direction of current cultural sex-role stereotypes (Huston, 1983). So, while it may be less than surprising to find even young girls' physical ability self-concepts reflecting sex-role stereotypes, what is surprising is the finding that as teacher endorsement of appropriate practice went up, girls' physical ability self-concepts went down. In the present study we did not examine teachers' actual classroom practices. Studies have shown that teachers do possess sex-role stereotypes about young children (Loeb & Horst, 1979; Silvern, 1978) and in classrooms often treat boys and girls differently according to sex-role expectations (Etaugh & Harlow, 1975; Fagot, 1981; Huston, 1983). Thus, any further research to address more fully the relationship between teacher beliefs in appropriate practice and girls' self-concepts will need to focus on specific teacher behaviors and look toward the overriding strength of cultural gender stereotypes in the classroom, despite professed teacher belief in developmentally appropriate practices.

For boys, the pattern of correlations presented a paradox. The DAP Scale score, indicating endorsement of developmentally appropriate practices, and the TRAD Scale score, indicating endorsement of traditional practices, both were positively correlated with academic self-concept. Neither showed any association with nonacademic self-concept. Furthermore, the TRAD

score was correlated with each of the SDQ subscale components of the academic self-concept score, that is, the Reading, Math and General School Self-Concept scales, while the DAP score was correlated with the Math and General School Self-Concept scales.

That for boys in this study academic self-concept , and in particular, math and general school self-concepts, increased as teacher endorsement of appropriate practice increased is in accord with our expectations stemming from the body of appropriate practice research mentioned previously. This research indicates that developmentally appropriate environments are associated with positive child outcomes. Thus, in this one aspect the results were as expected, favoring a developmental over a traditional classroom climate. However, the finding that the strongest associations between teacher beliefs and child self-concept were those between traditional beliefs and the several dimensions of academic self-concept is certainly outside what one would have expected from prior research.

One explanation might be found in the teacher belief scores themselves. A comparison of the belief scores of the teachers in the present sample with those of the original group of elementary teachers on whom the PTQ was developed (Smith, 1993) is helpful. On the TRAD Scale, which has a possible range of between 24 to 96, teachers in the present study scored very high (TRAD $\underline{M}$ = 73.24, $\underline{SD}$ = 9.09). The original sample used for scale development scored substantially lower (TRAD $\underline{M}$ = 48.56, $\underline{SD}$ = 9.52). Thus, these teachers in the current study endorsed traditional teaching practices to a very high degree. On the other hand, on the DAP Scale (DAP range = 18 to 72) these teachers endorsed

developmentally appropriate practices (DAP M = 58.94, SD = 6.98) to just about the same extent as did the teachers in the original group (DAP M = 58.34, SD = 5.94). Therefore, the teachers in the present study reported a high level of endorsement of both developmentally appropriate and traditional classroom practices. That the same individual can hold onto conflicting belief structures is a phenonmenon well documented in the research literature on teacher beliefs (Munby, 1982; Nespor, 1987; Nisbett & Ross, 1980; Pajares, 1992) and implies that contradictory paradigms are more likely to be compartmentalized than integrated (Nespor, 1987; Posner et al., 1982). The validity of this explanation for the results in the present study is bolstered by the fact that at the time of data gathering the second-grade teachers in the study were at the beginning of a district-level effort to move the use of developmentally appropriate practices upward from the kindergarten level, where inservice efforts had been concentrated initially, into the primary grades. Therefore, the coexistence of apparently incompatible belief structures may have been a functional response to staff development expectations for change.

So, what would it be like to be a child in a classroom of a teacher who holds conflicting belief systems, who endorses both developmentally appropriate and traditional teaching practices? While this study did not focus on such a question, we can infer that in such a setting children probably would be subject to a host of mixed messages and signals from the teacher about what is valued there and how one displays competence and achievement as a learner. Therefore, it is not surprising that measures of

children's self-concepts in academic areas would be correlated with both the teacher's beliefs about appropriate practice and beliefs about traditional teaching practice. In short, resourceful children may have discovered that in such a classroom there are many ways to be seen as and to see oneself as competent. Yet, while there was a mixed pattern of correlations concerning appropriate and traditional teacher beliefs and these second-grade children's multi-dimensional self-concepts, the most salient finding of this study is that only the teachers' traditional beliefs significantly predicted any aspect of child self-concept.

Conclusions and Recommendations

Two general points need to be made about the results of this study. The first concerns methodology. It was assumed that since previous studies had documented both positive cognitive and social-emotional outcomes, a multidimensional measure of self-concept based on both academic and nonacademic dimensions would be appropriate for the present study. The results reported here indicate that the use of a multifaceted measure of self-concept is certainly justified. However, much more work remains to be done on the correlates of the various dimensions of young children's multifaceted self-concepts.

The second point is that the most striking thing about the findings is that its results differ substantially from the findings of much of the previous research about the relationship between teacher appropriate practice or beliefs and child outcomes. For the most part, this body of work has indicated that generally positive child outcomes are associated with

developmentally appropriate teacher beliefs and practices and that less positive outcomes are associated with inappropriate beliefs and practices. From such prior research came the current study's assumption that the teacher's level of endorsement of developmentally appropriate practices would be positively related to child self-concept. Research cited earlier has shown higher achievement (Burts, Hart, Charlesworth, DeWolf, Ray, Manuel, & Fleege, 1993; Frede & Barnett, 1992; Hirsh-Pasek, Hyson, & Rescorla, 1990; Hyson, Hirsh-Pasek, & Rescorla, 1990; Marcon, 1992; 1994; Stipek, Feiler, Daniels, & Milburn, 1995) and self-perceptions of competence (Marcon,1992; 1993; 1994) in young children in appropriate settings. Therefore, to the degree that achievement and competence are components of self-concept (Coopersmith, 1967; Harter, 1983; Harter & Connell, 1982; Stipek & MacIver, 1989; Curry & Johnson, 1990), one would have expected higher levels of teacher endorsement of appropriate practices to be positively associated with higher self-concepts in young children. Looked at very simply, this proved to be partially the case in the present study, where, at least for boys, a higher level of teacher endorsement of developmentally appropriate practices was positively associated with higher academic self-concept, but was not related to boys' nonacademic self-concept. No positive associations were found between teacher beliefs and self-concept for girls.

But, upon closer examination the picture got murkier and more contradictory. In general, this study has provided some preliminary understanding of the relationship between teacher beliefs about what constitutes appropriate classroom practice and

children's self-concepts. But, its findings do not clearly support the notion that developmentally appropriate practices lead to positive child outcomes. While DAP was related to some such outcomes, overall the weight of the findings point to either DAP being related to negative outcomes (for girls) or to traditional practices related to or predicting higher child self-concepts (for boys). When viewed in light of the current debate in the early childhood literature about whether developmentally appropriate practices can or should be applied to all children (see e.g., Charlesworth, 1998; Lubeck, 1998; Mallory & New, 1994) these findings take on additional significance. At present we know relatively little about the multidimensional self-concepts of young children from diverse populations, let alone how teacher beliefs and attitudes might affect these. Information about teacher beliefs needs to be better tied to teacher classroom behavior and both need to be carefully examined as important components in the dynamics of young children's self-concepts. The debate over the role of developmentally appropriate practices in early education and their effects on young children, and the place of children's self-concepts in that debate, is important. The study presented here has provided some additional foundational steps in this process of elaboration of the relationship between teacher factors and child outcomes in early childhood classrooms.

References

Beane, J. (1991). Sorting out the self-esteem controversy. Educational Leadership, 49(1), 25-30.

Bredekamp, S. (1987). Developmentally appropriate practice in early childhood programs serving children from birth through age 8. Washington, DC: NAEYC.

Burts, D., Hart, C., Charlesworth, R., & Kirk, L. (1990). A comparison of frequencies of stress behaviors in kindergarten classrooms with developmentally appropriate versus developmentally inappropriate instructional practices. Early Childhood Research Quarterly, 5(3), 407-423.

Burts, D. Hart, C., Charlesworth, R., Fleege, P., Mosely, J., & Thomasson, R. (1992). Observed activities and stress behaviors of children in developmentally appropriate and inappropriate kindergarten classrooms. Early Childhood Research Quarterly, 7(2), 297-318.

Burts, D., Hart, C., Charlesworth, R., DeWolf, D., Ray, J., Manuel, K., & Fleege, P. (1993). Developmental appropriateness of kindergarten programs and academic outcomes in first grade. Journal of Research in Childhood Education, 8(1), 23-31.

Byrne, B. (1984). The general/academic self-concept nomological network: A review of construct validation research. Review of Educational Research, 54(3), 427-456.

Byrne, B. & Gavin, D. (1996). The Shavelson model revisited: Testing for the structure of academic self-concept across pre-, early, and late adolescents. Journal of Educational Psychology, 88(2), 215-228.

Charlesworth, R. (1998). Developmentally appropriate practice is for everyone. Childhood Education, 74(5), 274-282.

Charlesworth, R., Hart, C., Burts, D., Thomasson, R., Mosely, J., & Fleege, P. (1993). Measuring the developmental appropriateness of kindergarten teachers' beliefs and practices. Early Childhood Research Quarterly, 8(3), 255-276.

Coopersmith, S. (1967). The antecedents of self-esteem. San Francisco: W.H.Freeman.

Curry, N. & Johnson, C. (1990). Beyond self-esteem: Developing a genuine sense of human value. Washington, DC: National Association for the education of Young Children.

Delugach, R., Bracken, B., Bracken, M., & Schicke, M. (1992). Self-concept: Multidimensional construct exploration. Psychology in the Schools, 29(3), 213-223.

Dunn, L. & Kontos, S. (1997). Research in review: What have we learned about developmentally appropriate practice? Young Children, 52(5), 4-13.

Eiser, J. (1983). From attribution to behavior. In M. Hewstone (Ed.), Attribution theory: Social and functional extensions (pp. 160-169). Oxford: Basil Blackwell.

Erikson, E. (1963). Childhood and society, revised ed. New York: Norton.

Etaugh, C., & Harlow, H. (1975). Behaviors of male and female teachers as related to behaviors and attitudes of elementary school children. The Journal of Genetic Psychology, 127, 163-170.

Fagot, B. (1981). stereotypes versus behavioral judgments of sex differences in young children. Sex Roles, 7, 1093-1096.

Feeny, S. & Chun, R. (1985). Research in review: Effective teachers of young children, Young Children, 41(1), 47-52.

Frede, E. & Barnett, W. (1992). Developmentally appropriate public school preschool: A study of implementation of the High/Scope curriculum and its effects on disadvantaged children's skills at first grade. Early Childhood Research Quarterly, 7(4), 483-499.

Harter, S. (1983). Developmental perspectives on the self-system. In M. Heatherington (Ed.)., Handbook of child psychology: Vol. 4. Socialization, personality, and social development (4th ed., pp. 275-385). New York: Wiley.

Harter, S. & Connell, J. (1982). A comparison of alternative models of the relationship between academic achievement and children's perceptions of competence, control, and motivational orientation. In J. Nicholls (Ed.)., The development of achievement-related cognitions and behaviors. Greenwich, CN: J.A.I. Press.

Harter, S. & Pike, R. (1984). The pictorial scale of perceived competence and social acceptance for young children. Child Development, 55, 1969-1982.

Harvey, J. & Weary, G. (1985). Attribution: Basic issues and applications. Orlando, FL: Academic Press.

Hatch, J. & Freeman, E. (1988). Kindergarten philosophies and practices: Perspectives of teachers, principals, and supervisors. Early Childhood Research Quarterly, 3(2), 151-166.

Hirsh-Pasek, K., Hyson, M, & Rescorla, L. (1990). Academic environments in preschool: Do they pressure or challenge young children? Early Education and Development, 1, 401-23.

Huston, A. (1983). Sex-typing. In M. Heatherington (Ed.)., Handbook of child psychology: Vol. 4. Socialization, personality, and social development (4th ed., pp. 387-467). New York: Wiley.

Hyson, M., Hirsh-Pasek, K., & Rescorla, L.. (1990). The Classroom Practices Inventory: An observation instrument based on NAEYC's guidelines for appropriate practices for 4- and 5-year-old children. Early Childhood Research Quarterly, 5(4), 475-494.

Kagan, D. & Smith, K. (1988). Beliefs and behaviors of kindergarten teachers. Educational Research, 30(1), 26-35.

Katz, L. (1989). Family living: Suggestions for parenting. (ERIC Document Reproduction Service No. ED313168).

Ketner, C., Smith, K., & Parnell, M.K. (1996). The relationship between teacher theoretical orientation to reading and endorsement of developmentally appropriate practice. Journal of Educational Research, 90(4), 212-220.

Loeb, R. & Horst, L. (1978). Sex differences in self- and teachers' reports of self-esteem in preadolescents. Sex Roles, 4, 779-788.

Love, J., Ryer, P., & Faddis, B. (1992). Caring environments: Program quality in California's publicly funded child development programs. Portsmouth, NH: RMC Research Corporation.

Lubeck, S. (1998). Is developmentally appropriate practice for everyone? Childhood Education, 74(5), 283-292.

Mallory, B. & New, R. (Eds.)(1994). Diversity and developmentally appropriate practices: Challenges for early childhood education. NY: Teachers College press.

Marcon, , R. (1992). Differential effects of three preschool

models on inner-city 4-year-olds. Early Childhood Research Quarterly, 7(4), 517-530.

Marcon, R. (1993). Socioemotional versus academic emphasis: Impact on kindergartners' development and achievement. Early Childhood Development and Care, 96, 81-91.

Marcon, R. (1994). Doing the right thing: Linking research and policy reform in the District of Columbia Public Schools. Young Children, 50(1), 8-20.

Marsh, H. (1986). Negative items in rating scales for preadolescent children: A cognitive-developmental phenonmenon. Developmental Psychology, 22, 37-49.

Marsh, H. (1988). Self Description Questionnaire: A theoretical and empirical basis for the measurement of multiple dimensions of preadolescent self-concept: A test manual and a research monograph. San Antonio, TX: Psychological Corporation.

Marsh, H. (1993). The multidimensional structure of academic self-concept: Invariance over gender and age. American Educational Research Journal, 30(4), 841-860.

Marsh, H. & Gouvernet, P. (1989). Multidimensional self-concepts and perceptions of control: Construct validation responses by children. Journal of Educational Psychology, 81(1), 57-69.

Marsh, H., Craven, R., & Debus, R. (1991). Self-concepts of young children 5 to 8 years of age: Measurement and multidimensional structure. Journal of Educational Psychology, 83(3), 377-392.

Munby, H. (1982). The place of teachers' beliefs in research on teacher thinking and decision making, and an alternative

methodology. Instructional Science, 11, 201-225.

Nespor, J. (1987). The role of beliefs in the practice of teaching. Journal of Curriculum Studies, 19, 317-328.

Nisbett, R. & Ross, L. (1980). Human inferences: Strategies and shortcomings of social judgment. Englewood Cliffs, NJ: Prentice-Hall.

Oakes, P. & Caruso, D. (1990). Kindergarten teachers' use of developmentally appropriate practices and attitudes about authority. Early Education and Development, 1, 445-457.

Olson, J., Roese, N., & Zanna, M. (1996). Expectancies. In E. Higgins & A. Kruglanski, (Eds.), Social psychology: Handbook of basic principles (pp. 211-238). NY: The Guilford Press.

Pajares, M. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. Review of Educational Research, 62(3), 307-332.

Piaget, J. & Inhelder, B. (1969). The psychology of the child. London: Routledge & Kegan Paul.

Posner, G., Strike, K., Hewson, P., & Gertog, W. (1982). Accommodation of a scientific conception: Toward a theory of conceptual change. Science Education, 66, 211-227.

Rogers, C. (1982). The contributions of attribution theory to educational research. In C. Antaki & C. Brewin (Eds.), Attributions and psychological change: Applications of attributional theories to clinical and educational practice (pp. 227-245). London: Academic Press.

Rosenholtz, S. (1981). Organizational determinants of classroom social power. Journal of Experimental Education, 50(2), 83-87.

Shavelson, R., Hubner, J., & Stanton, G. (1976). Self-concept: Validation of construct interpretations. Review of Educational Research, 46(3), 407-441.

Sheridan, M. (1991). Increasing self-esteem and competency in children. International Journal of Early Childhood, 23(1), 28-35.

Silvern, L. (1978). Masculinity-femininity in children's self-concepts: The relationship to teachers' judgments of social adjustment and academic ability, classroom behaviors, and popularity. Sex Roles, 4, 929-949.

Smith, K. (1993). Development of the Primary Teacher Questionnaire. Journal of Educational Research, 87(1), 23-29.

Smith, K. (1997). Student teachers' beliefs about developmentally appropriate practice: Pattern, stability, and the influence of locus of control. Early Childhood Research Quarterly, 12(2), 221-243.

Smith, L. & Shepard, L. (1988). Kindergarten readiness and retention: A qualitative study of teachers' beliefs and practices. American Educational Research Journal, 25(3), 307-333.

Spidell, R. (1988). Play in the classroom: A descriptive study of preschool teachers' beliefs. Early Childhood Development and Care, 41(1), 153-172.

Spodek, B. (1988a). Implicit theories of early childhood teachers: Foundations for professional behavior. In B. Spodek, O. Saracho, & D. Peters (Eds.), Professionalism and the early childhood practitioner (pp. 161-172). New York: Teachers College Press.

Spodek, B. (1988b). The implicit theories of early childhood

teachers. Early Child Development and Care, 38, 13-31.

Stipek, D. & Daniels, D. (1988). Declining perceptions of competence: A consequence of changes in the child or in the educational environment? Journal of Educational Psychology, 80(3), 352-356.

Stipek, D. & MacIver, D. (1989). Developmental change in children's assessment of intellectual competence. Child Development, 60(3), 521-538.

Stipek, D, Feiler, R., Daniels, D., & Milburn, S. (1995). Effects of different instructional approaches on young children's achievement and motivation. Child Development, 66, 209-223.

Verma, S. & Peters, D. (1975). Day care teachers' practices and beliefs. The Alberta Journal of Educational Research, 21(1), 46-55.

Wing, L. (1989). The influence of preschool teachers' beliefs on young children's conceptions of reading and writing. Early Childhood Research Quarterly, 4(1), 61-74.

Vygotsky, L. (1962). Thought and language. (E. Hanfmann and G. Vokar, Trans.). Cambridge MA: MIT Press. (Original work published in 1934).

Table 1

April Means, by Sex, for SDQ Self-Concept Scores

	Sex	
	Males[a]	Females[b]
Self-Concept Measure		
Nonacademic S-C		
M	35.81	34.28
(SD)	(3.35)	(3.95)
Academic S-C		
M	35.96	34.32
(SD)	(4.45)	(5.14)
Physical Ability S-C		
M	38.57	33.61
(SD)	(1.67)	(6.61)
Physical Appearance S-C		
M	34.48	32.86
(SD)	(3.25)	(4.62)
Peer S-C		
M	33.91	33.50
(SD)	(4.54)	(4.67)
Parent S-C		
M	36.91	36.68
(SD)	(3.59)	(3.06)

Reading S-C		
M	37.22	36.14
(SD)	(3.93)	(4.58)
Math S-C		
M	36.00	33.21
(SD)	(6.22)	(6.64)
General School S-C		
M	35.17	33.21
(SD)	(3.99)	(5.88)

$^{a}n=23$. $^{b}n=28$.

Table 2

Multiple Regressions: Predicting April SDQ Self-Concept Scores for Boys

Dependent variable	R	Significant predictors	Beta weights	Adjusted Cumulative R^2
Physical Ability S-C	.422	Nov. Physical Ability S-C*	.422	0.139
Physical appearance S-C	.674	Nov. Physical Appearance S-C**	.674	0.429
Parent S-C	.522	Nov. Parent S-C*	.522	0.237
Peer S-C	----	No significant predictor	----	-----
Reading S-C	.820	Nov. Reading S-C**	.820	0.625
Math S-C	.612	Nov. Math S-C**	.612	0.345
General School S-C	.873	Nov. General School S-C**	.689	0.625
		Teacher TRAD Score**	.365	0.738

*$\underline{t} < .05$. **$\underline{t} < .01$.

Table 3

Multiple Regressions: Predicting April SDQ Self-Concept Scores for Girls

Dependent variable	R	Significant predictors	Beta weights	Adjusted Cumulative R^2
Physical Ability S-C	.736	Nov. Physical Ability S-C**	.736	0.524
Physical appearance S-C	.647	Nov. Physical Appearance S-C**	.647	0.397
Parent S-C	.595	Nov. Parent S-C*	.595	0.329
Peer S-C	.448	Nov. Peer S-C**	.448	0.170
Reading S-C	----	No significant predictor	----	-----
Math S-C	.459	Nov. Math S-C*	.459	0.181
General School S-C	----	No significant predictor	----	-----

*t < .05. **t < .01.

Table 4

Correlation of Teacher DAP and TRAD Scores With Child April SDQ Self-Concept Scores

	Sex			
	Boys[a]		Girls[b]	
	PTQ Scale		PTQ Scale	
SDQ Scale	DAP	TRAD	DAP	TRAD
Physical Ability	-.17	-.20	-.34*	-.15
Physical Appearance	-.06	.08	-.16	-.04
Parent	.30	.33	-.28	-.16
Peer	.12	.27	-.18	-.10
Reading	.32	.35*	-.12	-.01
Math	.37*	.46*	-.14	-.05
General School	.45*	.58**	-.11	-.11

*$p < .05$. **$p < .01$.

[a]$n=23$. [b]$n=28$.